Chapter III – HH PPS Case-Mix Overview

1.0 Background: Why Case-Mix Adjustment?

Under the Prospective Payment System (expected to go into effect October 1, 2000), most[1] payments to home health agencies will no longer be based on the quantity and type of services provided to an eligible beneficiary. Instead, most home health services provided to Medicare patients will be reimbursed using a fixed rate for each 60-day episode of care, which will not vary based on the total services actually provided to that patient or the costs that the home health agency incurs.

To assure that agencies will continue to serve patients with anticipated costs that are higher than average, the episode payments will be adjusted to reflect the anticipated resource needs of each beneficiary. The adjustments will not be based on all of the services actually provided to the beneficiary; this would represent a return to cost-reimbursement. Rather, the adjustment will be based on an algorithm that predicts the total resources expected to be required to care for the patient, and adjusts the base payment for the episode accordingly. This is termed "case-mix adjustment."

The purpose of including a case-mix adjuster in the new PPS is to recognize that different patients require different amounts of resources for their care, and that some agencies may serve caseloads that include disproportionate shares of patients with above-average (or below-average) care needs. By having multiple possible payment rates, based on patients' anticipated care needs, the system can decrease the average difference between the set payment and each patient's actual cost to the agency. This reduces the risk to the provider and to Medicare. It's also good for patients, since it allows agencies to accept high-need cases more comfortably than under the current system, since higher payments can be anticipated. At the same time, it should reduce the incentive for an agency to focus excessively on admitting low-need, low-cost, patients, since they will receive lower payment for them.

2.0 The Case-mix Adjuster Model

The case-mix adjuster model is the system which projects patient resource use based on patient characteristics. This algorithm was developed for HCFA by a contractor, Abt Associates Inc. The model classifies patients into case-mix groups using information from the Outcomes and Assessment Information Set (OASIS), a patient assessment data set designed to measure patient status and functioning, and outcomes of home health care. As of July 19, 1999, Medicare-certified home health

[1] Episodes with less than 4 visits provided will likely be paid on a per-visit basis.

agencies were required to conduct a uniform comprehensive patient assessment that includes the OASIS items. Since August 19, 1999, they have been required to encode (data enter) and electronically transmit the encoded OASIS data on Medicare and Medicaid patients to a state OASIS data repository.

The case-mix model uses data elements from the OASIS assessment instrument which have been shown to influence home health resource utilization. These elements were selected based on statistical analysis of extensive data on approximately 30,000 episodes of Medicare home health care experienced by approximately 20,000 Medicare beneficiaries at home health agencies in eight states; review of the clinical and research literature; and consultation with home health clinicians, government policy experts, and researchers.

Details on the development of the case-mix model were published in the Notice of Proposed Rulemaking (Federal Register, October 28, 1999 – see Appendix A). All of the variables on patients were considered for inclusion in the model. and many alternatives were considered. All were screened using the following criteria:

- Policy appropriateness - excluding items that would not be considered as an acceptable basis for payment, such as patient race;
- Avoid perverse incentives - excluding items which would create incentive for providers to distort patterns of good care;
- Minimize "gameability" - exclude variables which would create opportunities for providers to manipulate the system to maximize reimbursement;
- Reliability, subjectivity, transience - exclude variables that are not reliable from assessor to assessor;
- Administrative burden - exclude items which would require excessive data collection or other investment by home health agencies; and
- Statistical performance - enhances the accuracy of the current project.

Items which passed these hurdles were added to the model. Analysts tested many combinations and permutations to arrive at this version.

The elements of the case-mix model are organized into three domains:

- clinical severity;
- functional status; and
- service utilization.

The Clinical Severity Domain captures significant indicators of clinical needs from several OASIS items. These include patient history, sensory, integument, respiratory, elimination, and neuro/emotional/ behavioral status. It includes OASIS items pertaining to the following clinical conditions and risk factors: diagnoses involving orthopedic, neurological, or diabetic conditions; therapies used at home (i.e., intravenous therapy or infusion therapy, parenteral and enteral nutrition); vision; pain frequency; pressure ulcers, stasis ulcers, burns, trauma and surgical

wounds; dyspnea; urinary and bowel incontinence; bowel ostomy; and cognitive/behavioral problems, such as impaired decision making and hallucinations.

The Functional Status Domain is comprised of six Activities of Daily Living (ADLs) from the ADL/IADL sections of the OASIS assessment instrument. These include upper and lower body dressing, bathing, toileting, transferring, and locomotion.

The Service Utilization Domain is the third case mix dimension and includes two types of data elements. First is the patient's use of inpatient services in the 14 days preceding admission to home care. This information is obtained from the patient history section of the OASIS. The second is receipt of home health rehabilitation therapies totaling at least 10 home health therapy (PT, OT, SLP) visits during the home health episode. Although ideally case-mix would be based on data elements which do not depend on planned treatment, this measure has been demonstrated to be extremely powerful in explaining resource use. Defining the variable with a minimum of 10 visits excludes "evaluation-only" patients and targets the additional payment to patients with a relatively intense course of rehab therapy. A new variable, M0825, has been added to the OASIS tool to capture this information and will be in use when PPS becomes operational in the fall of 2000.

A grid listing the OASIS items used in the model, and corresponding descriptions, values and scoring is provided in Exhibit 2.1. The initial model described in the Proposed Rule in October 1999 was subsequently refined in response to public comments. The model shown in Exhibit 2.1 reflects these changes and depicts the items that are included in the version of the adjuster that was published in the final PPS Rule.[2]

Specific issues related to particular variables that were (or were not) included in the model are discussed below:

Diagnosis. Home health diagnosis is generally used informally to characterize home health patients and the types of services they require. Therefore, it was a leading candidate for inclusion in the model. Since OASIS completion rules at the time required submission of only the first three digits of the ICD9-CM diagnosis code, the analysis used these categories. Since individual analysis of the 900+ codes was not practical, the diagnosis codes were grouped into Diagnostic Groups or DGs. These were based on the Quality Indictor Groups (QUIGs) that had been developed for use in monitoring home health care and outcomes with the OASIS. Three of the DGs were found to be statistically significant predictors of home health resource use – Orthopedic, Neurologic, and Diabetes. A fourth category, Burns/Trauma, is not based on the QUIGs but was subsequently added to the model to capture patients with high needs for wound care who are not otherwise captured by existing OASIS items. A listing of the ICD9-CM codes included in each DG as a primary or secondary diagnosis is presented in Appendix B.

Secondary diagnoses/manifestation codes. One change from the previous version of the model is the consideration of the first secondary diagnosis in some cases. This takes place when the diagnosis of interest for case-mix purposes is a code the *manifestation* of an underlying condition which is entered as the primary diagnosis. For example: in a patient with polyneuropathy in diabetes, 357.2 would be

[2] It is possible that the model will be modified further before implementation of PPS. If this occurs the software will be modified accordingly.

coded as the secondary diagnosis. The primary diagnosis would be 250.6, diabetes with neurological complication. For the patient to be classified into the neurologic DG, the manifestation code MUST be entered in the FIRST line of M0240. The patient will not be classified into the neurologic DG (and the ICD9_CM coding will not be correct) if 357.2 is entered as the primary diagnosis in M0230, or if it is entered below the first line of M0240.

Availability of Caregiver. In the early stages of developing the case-mix model, the availability fo an informal caregiver was excluded on the grounds that including it would discourage informal caregiving and could encourage inaccurate reporting on the OASIS. Once the model had been developed, inclusion of the caregiver variable was tested and was found to add little additional explanatory power to the model, given the variables that were already included. Therefore, this variable was ultimately excluded from the model.

Service Utilization Variables. The treatment of the item capturing a recent hospital discharge (M0175, line 1) is unique in that a point is given when the item is blank. This is because the analysis found that patients who had a rehab or SNF discharge as well as a hospital discharge in the 14 days before home health admission generally had lower resource use than patients who had been in a rehab or SNF only. It is theorized that those who can move from hospital to rehab/SNF to home care in 14 days are making good progress, while those who come to home care from a longer rehab or SNF stay likely have more chronic problems or are progressing more slowly.

Response Values, Scores and Severity Levels

There are several terms related to the case-mix model that are important to understand when working with it or explaining it to providers.

OASIS Item Response Values. The Outcome and Assessment Information Set (OASIS) contains 90 data items. OASIS item responses involve unique statements that require an objective assessment, and the number of possible responses varies by item. For OASIS items in the case-mix adjuster, each of the possible responses have point values assigned to them that reflect their relationship to home health resource utilization. In most of the items, several responses are grouped and assigned one value. For example, for item MO670 (Bathing), response options 2, 3, 4 or 5 (ranging from "able to bathe in shower or tub with the assistance of another person" to "totally bathed by another person") are all given a point value of 8. If the patient had been rated as independent in bathing, however, with a response of 0, no value is added to the score.

Point Scores. The point values for the OASIS items within each of the three domains are summed to determine a patient's point score in each domain (clinical, functional and service utilization.) For example, if the response for each of the items listed in the Functional Domain is a 2, then the score for the domain would be calculated as shown in Exhibit 2.2.

Exhibit 2.1

Case-mix Adjustment Model Defining Home Health Resource Groups

Clinical Severity Domain			
OASIS+ Item	**Description**	**Value**	**Severity Levels**
M0230/ M0240	Primary home care diagnosis *(plus first secondary dx ONLY for selected manifestation codes*	*- credit only the single highest value:* If Orthopedic DG, add 11 to score If Diabetes DG, add 17 to score If Neurological DG, add 20 to score	Min (C0) = 0-7 Low (C1) = 8-19 Mod (C2) = 20-40 High (C3) = 41+
M0250	IV/Infusion/ Parenteral/Enteral Therapies	*- credit only the single highest value:* If box 1, add 14 to score If box 2, add 20 to score If box 3, add 24 to score	
M0390	Vision	If box 1 or 2, add 6 to score	
M0420	Pain	If box 2 or 3, add 5 to score	
M0440	Wound/Lesion	If box 1 and M0230 is Burn/Trauma DG, add 21 to score	
M0450	Multiple pressure ulcers	If 2 or more stage 3 or 4 pressure ulcers, add 17 to score	
M0460	Most problematic pressure ulcer stage	If box 1 or 2, add 15 to score If box 3 or 4, add 36 to score	
M0476	Stasis ulcer status	If box 2, add 14 to score If box 3, add 22 to score	
M0488	Surgical wound status	If box 2, add 7 to score If box 3, add 15 to score	
M0490	Dyspnea	If box 2, 3 or 4, add 5 to score	
M0530	Urinary incontinence	If box 1 or 2, add 6 to score	
M0540	Bowel incontinence	If box 2-5, add 9 to score	
M0550	Bowel ostomy	If box 1 or 2, add 10 to score	
M0610	Behavioral Problems	If box 1-6, add 3 to score	

Functional Status Domain			
OASIS+ Item	**Description**	**Value**	**Severity Levels**
M0650 (current) M0660 (current)	Dressing	If M0650 = box 1, 2 or 3 \ or M0660 = box 1, 2 or 3 / }-> add 4 to score	Min (F0) = 0-2 Low (F1) = 3-15 Mod (F2) = 16-23 High (F3) = 24-29 Max (F4) = 30
M0670 (current)	Bathing	If box 2, 3, 4 or 5 add 8 to score	
M0680 (current)	Toileting	If box 2 - 4, add 3 to score	
M0690 (current)	Transferring	If box 1, add to 3 score If box 2 - 5, add to 6 score	
M0700 (current)	Locomotion	If box 1 or 2, add 6 to score If box 3 - 5, add 9 to score	

Service Utilization Domain			
Variable	**Description**	**Value**	**Severity Levels**
*M0175 □ line 1	NO Hospital discharge past 14 days	If box 1 IS BLANK, add 1 to score	Min (S0) = 0-2 Low (S1) = 3 Mod (S2) = 4-6 High (S3) = 7
*M0175 □ line 2 or 3	Inpatient rehab/SNF discharge past 14 days	If box 2 or 3, add 2 to score	
*M0825	Therapy threshold *(10 or more therapy [PT, OT, SLP] visits during episode)*	If box 1, add 4 to score	
*These items added or re-numbered in the 8/2000 version of the OASIS data set.			

Exhibit 2.2

Calculating Domain Scores from Response Values

M0650 (current) M0660 (current)	Dressing	Response 2 has a value of 4, so 4 is added to the score.
M0670 (current)	Bathing	Response 2 has a value of 8, so 8 is added to the score.
M0680 (current)	Toileting	Response 2 has a value of 3, so 3 is added to the score.
M0690 (current)	Transferring	Response 2 has a value of 6, so 6 is added to the score.
M0700 (current)	Locomotion	Response 2 has a value of 6, so 6 is added to the score.
Summing the values for the items produces a score of 27 for the functional domain for this patient.		

Severity Levels. Within each domain, the total score is assigned to a *severity level*. For example, a summed score of 27 in the Functional Domain, as shown in Exhibit 2.2, would place a patient in the "high" (F3) functional severity level. There are four clinical severity levels, five functional severity levels, and four service utilization severity levels. The range of scoring differs for each domain, so that a score of 25 in the Clinical Domain would correspond to a moderate (C2) clinical severity level, but a score of 25 in the Functional Domain would place the patient in the high functional severity level. A patient with a score of 43 for the Clinical Domain would be placed in the high clinical (C3) severity level, while a patient with a total score of 6 in the Service Domain would be placed in the moderate (S2) severity level for that domain.

HHRGs and HIPPS: Each of the 80 possible combinations of clinical severity, functional status and service utilization severity levels result represents a Home Health Resource Groups (HHRG). For example, the patient with high clinical severity (C3), high functional severity (F3), and moderate service utilization (S2) would be placed in the "C3F3S2" HHRG. The other HHRGs are derived in a similar manner.

Home health claims submitted for payment under PPS will be required to include a code that indicates the HHRG for the episode. However, the 6-character HHRG label will not be entered on the claim. Instead, a 5-character code called a "Health Insurance Prospective Payment System" or "HIPPS" code will be used. The HIPPS code indicates not only the HHRG to which the episode was assigned, but also which, if any, of the domains had OASIS items with missing or otherwise invalid data.

The first position of every HIPPS code is the letter H. The second, third and fourth positions of the code cross-walk to the HHRG as shown in Exhibit 2.3 below.

The fifth position of the HIPPS code indicates which of the codes were computed based on valid data, or had to be derived, because some of the data for that domain of the case-mix adjuster were invalid. (The validity flag does not effect payment for the HHRG. It is a flag to alert the agency and Medicare that the patient's current HHRG is not based on complete data from the assessment.) The codes for position 5 of the HIPPS code are shown in Exhibit 2.4.

Exhibit 2.3

HHRG to HIPPS Code Cross-walk -- Positions 2-4

Domain Level	Clinical Domain (HIPPS Position 2)	Functional Domain (HIPPS Position 3)	Service Domain (HIPPS Position 4)
Minimal Severity	C0 = A	F0 = E	S0 = J
Low Severity	C1 = B	F1 = F	S1 = K
Moderate Severity	C2 = C	F2 = G	S2 = L
High Severity	C3 = D	F3 = H	S3 = M
Maximum Severity	-	F4 = I	-

Exhibit 2.4

HHRG to HIPPS Code Cross-walk -- Position 5

Position 5 of HIPPS Code	Definition
1	Clinical, Functional, and Service Domains computed
2	Clinical Domain derived
3	Functional Domain derived
4	Service Domain derived
5	Clinical and Functional Domains derived
6	Functional and Service Domains derived
7	Clinical and Service Domains derived
8	Clinical, Functional, and Service Domains derived

Examples of translating the HIPPS Code are as follows:

HIPPS Code = HAEJ1 would indicate a patient whose HHRG code is minimal clinical severity, minimal functional severity, and minimal service severity. All items in all domains had valid data, so all the codes were computed.

HIPPS Code = HCFM5 would indicate a patient whose HHRG code is moderate clinical severity, low functional severity, and high service severity, and the codes for the functional and service domains were derived because some of the items in each of those domains had responses which were invalid.

A complete list of HHRGs and corresponding HIPPS codes is presented in Appendix C.

3.0 Calculating HHRGs and HIPPS Codes

Getting to the HIPPS code from the original OASIS data can be a complicated calculation, but agencies will have a number of tools available to help them get this done. While pencil and paper IS an option, and may be helpful for "getting a feel" for the classification procedure at first, it is not very efficient. However, Exhibit 3.1 is a worksheet that agencies could use to classify a few patients "by hand." A computerized option, such as the grouper spreadsheet offered on the HCFA web site is probably more useful for trying out some "what-if" scenarios with patient-level data. The web site address for the grouper spreadsheet is:

http://www.hcfa.gov/medicare/grouper.xls.

For ongoing operations, agencies will need to integrate the grouping logic into their automated billing, accounting, and clinical information systems. HCFA offers the grouping logic in a 'ready to use" software module, called a ".DLL file" (dynamic linked library). This is a file that is designed to work with other software applications rather than independently, though a "demo" program is also provided to show how the module can be used.

The grouper module reads in OASIS data from a text file in the standard OASIS or HAVEN 1448-byte record format that every agency must use to submit OASIS data to the state. After reading in the OASIS data and performing the classification, the grouper outputs the HIPPS code and the "Claim – OASIS Matching Key." This is 18-characters of data taken from the OASIS assessment which combines the start of care date, the date the assessment was completed, and the reason for the assessment. This key must be entered in field locator 63 (treatment authorization code) on each claim that has a HIPPS code (which is entered in the HCPCS field on the episode line item.) It will let the system know which OASIS assessment was used to generate the HIPPS code for that patient. This information will later be used for research, for quality monitoring, and for program integrity activities.

The grouper module and associated files are available from the HCFA Home Health PPS home page:

http://www.hcfa.gov/medicare/hhmain.htm

This module will be integrated into HAVEN, so that the HIPPS code will be generated as soon as the OASIS data are entered by agency staff. It is also anticipated that private vendors will incorporate the HCFA grouper module into their proprietary clinical and billing systems. However, some vendors may maintain systems that are not able to incorporate it, and use of the module is *not* required. Vendors or agencies may code the classification logic directly into their data systems, rather than utilizing the HCFA module. However, they must assure that the logic is implemented correctly and completely.

In addition to the grouper module itself and the demonstration program, the HCFA web site demonstration offers documentation that explains how the grouper can be used in conjunction with other applications. There is also computer programming "pseudocode" which lays out the classification logic in simple terms. This is provided to help vendors and agencies who may need to program the grouping logic into their own systems. Another tool for software developers is a file of 1000 test data records. This file is provided so that vendors, agencies, and other external parties can test the accuracy of any software they develop to implement the grouping logic without using the HCFA grouper software module.

Exhibit 3.1: Home Health Resource Group (HHRG) Worksheet DRAFT *Abt Associates Inc. 2000*

PT NAME: _____ EPISODE START: _____ (HHRG): **C___ F___ S___**

Clinical Severity Domain

OASIS Item	Description	Item Response	I. Scoring Rules	Item SCORE
M0230(a)/ M0240(b)	Primary home care diagnosis/ *First* secondary diagnosis		If Orthopedic DG, add 11 to score If Neurological DG, add 20 to score If Diabetes DG, add 17 to score *(If Burn/Trauma DG, see under M0440)*	*(max is 20)*
M0250	IV/Infusion/ Parenteral/ Enteral Therapies		If box 1, add 14 to score If box 2, add 20 to score If box 3, add 24 to score	*(max is 24)*
M0390	Vision		If box 1 or 2, add 6 to score	
M0420	Pain		If box 2 or 3, add 5 to score	
M0440	Wound/Lesion		If box 1 and M0230/240 is Burn/Trauma DG, add 21 to score	
M0450	Multiple pressure ulcers		If 2 or more stage 3 or 4 pressure ulcers, add 17 to score	
M0460	Current stage, most problematic pressure ulcer		If box 1 or 2, add 15 to score If box 3 or 4, add 36 to score	*(max is 36)*
M0476	Stasis ulcer		If box 2, add 14 to score If box 3, add 22 to score	
M0488	Surgical wound		If box 2, add 7 to score If box 3, add 15 to score	
M0490	Dyspnea		If box 2, 3 or 4, add 5 to score	
M0530	Urinary incontinence		If box 1 or 2, add 6 to score	
M0540	Bowel incontinence		If box 2, 3 , 4, or 5, add 9 to score	
M0550	Bowel ostomy		If box 1 or 2, add 10 to score	
M0610	Behavioral Problems		If box 1, 2, 3, 4, 5 or 6, add 3 to score	*(max is 3)*
TOTAL SCORE:				
Categories: [0-7 = **C0**] [8-19 = **C1**] [20-40 = **C2**] [41+ = **C3**]			**CATEGORY:**	**C**

Functional Status Domain

OASIS Item	Description	Item Response	Scoring Rules	Item SCORE
M0650 (current)	Dressing upper body		If M0650 = box 1, 2 or 3; Or if M0660 = box 1, 2 or 3; add 4 to score	*(max is 4)*
M0660 (current)	Dressing lower body			
M0670 (current)	Bathing		If box 2, 3, 4, or 5, add 8 to score	
M0680 (current)	Toileting		If box 2, 3, or 4, add 3 to score	
M0690 (current)	Transferring		If box 1, add 3 to score If box 2, 3, 4, or 5, add 6 to score	
M0700 (current)	Locomotion		If box 1 or 2, add 6 to score If box 3, 4, 5, add 9 to score	
TOTAL SCORE:				
Categories: [0-2 = **F0**] [3-15 = **F1**] [16-23 = **F2**] [24-29 = **F3**] [30= **F4**]			**CATEGORY:**	**F**

Service Utilization Domain

OASIS Item	Description	Item Response	Scoring Rules	Item SCORE
M0175 □ line 1	Hospital discharge past 14 days		If box 1 IS BLANK, add 1 to score	
M0175 □ line 2	Rehab dischg. past 14 days		If box 2 or 3, add 2 to score	*(max is 2)*
M0175 □ line 3	SNF dischg. past 14 days			
M0825	10 or more therapy (PT,SLP,OT) visits planned/recd. in 60 days		If yes, add 4 to score	
TOTAL SCORE				
Categories: [0-2 = **S0**] [3 = **S1**] [4-6 = **S2**] [7 = **S3**]			**CATEGORY:**	**S**

Appendices

Appendix A: **Background on Development of the Case-mix Adjustment Model**

Appendix B: **ICD9-CM Diagnosis Codes Comprising the Diagnostic Groups (DGs) for Home Health Resource Groups (HHRG) Assignment**

Appendix C: **Home Health Resource Groups (HHRGs) and Health Insurance PPS (HIPPS) Codes**

Appendix A

Background on Development of the Case-mix Adjustment Model

Excerpt from Notice of Proposed Rulemaking
Federal Register, October 28, 1999
Pages 58179 – 58186

Appendix B

ICD9-CM Diagnosis Codes Comprising the Diagnostic Groups (DGs) for Home Health Resource Group (HHRG)

Appendix B
ICD9-CM Diagnosis Codes Comprising the Diagnostic Groups (DGs) for Home Health Resource Group (HHRG) Assignment

(Sorted by diagnostic group, then ICD9-CM code)

NOTE: Codes that are shown at the 3-digit level include all the underlying 4- And 5-digit codes as well

Diagnostic Group (DG)	ICD9-CM	Short Description	Primary only/ secondary only
BURN/TRAUMA	870	OCULAR ADNEXA OPEN WOUND	Primary
BURN/TRAUMA	872	OPEN WOUND OF EAR	Primary
BURN/TRAUMA	873	OTHER OPEN WOUND OF HEAD	Primary
BURN/TRAUMA	874	OPEN WOUND OF NECK	Primary
BURN/TRAUMA	875	OPEN WOUND OF CHEST	Primary
BURN/TRAUMA	876	OPEN WOUND OF BACK	Primary
BURN/TRAUMA	877	OPEN WOUND OF BUTTOCK	Primary
BURN/TRAUMA	878	OPEN WOUND GENITAL ORGAN	Primary
BURN/TRAUMA	879	OPEN WOUND SITE NEC	Primary
BURN/TRAUMA	880	OPN WND SHOULDR/UPPR ARM	Primary
BURN/TRAUMA	881	OPEN WOUND OF LOWER ARM	Primary
BURN/TRAUMA	882	OPEN WOUND OF HAND	Primary
BURN/TRAUMA	883	OPEN WOUND OF FINGER	Primary
BURN/TRAUMA	884	OPEN WOUND ARM MULT/NOS	Primary
BURN/TRAUMA	885	TRAUM AMPUTATION THUMB	Primary
BURN/TRAUMA	886	TRAUM AMPUTATION FINGER	Primary
BURN/TRAUMA	890	OPEN WOUND OF HIP/THIGH	Primary
BURN/TRAUMA	891	OPEN WND KNEE/LEG/ANKLE	Primary
BURN/TRAUMA	892	OPEN WOUND OF FOOT	Primary
BURN/TRAUMA	893	OPEN WOUND OF TOE	Primary
BURN/TRAUMA	894	OPEN WOUND OF LEG NEC	Primary
BURN/TRAUMA	895	TRAUMATIC AMPUTATION TOE	Primary
BURN/TRAUMA	941	BURN OF HEAD/FACE/NECK	Primary
BURN/TRAUMA	942	BURN OF TRUNK	Primary
BURN/TRAUMA	943	BURN OF ARM	Primary
BURN/TRAUMA	944	BURN OF HAND & WRIST	Primary
BURN/TRAUMA	945	BURN OF LEG	Primary
BURN/TRAUMA	946	BURN OF MULTIPLE SITE	Primary
BURN/TRAUMA	948	BURN BY % BODY SURFACE	Primary
BURN/TRAUMA	949	BURN UNSPECIFIED	Primary
DIABETES	250	DIABETES MELLITUS	Primary
NEURO	013	CNS TUBERCULOSIS	Primary
NEURO	045	ACUTE POLIOMYELITIS	Primary
NEURO	046	CNS SLOW VIRUS INFECTION	Primary
NEURO	047	ENTEROVIRAL MENINGITIS	Primary
NEURO	048	OTH ENTEROVIRAL CNS DIS	Primary
NEURO	049	OTH NONARTHROPOD CNS VIR	Primary
NEURO	191	MALIGNANT NEOPLASM BRAIN	Primary
NEURO	192	MAL NEO NERVE NEC/NOS	Primary
NEURO	225	BENIGN NEO NERVOUS SYST	Primary

Appendix B
ICD9-CM Diagnosis Codes Comprising the Diagnostic Groups (DGs) for Home Health Resource Group (HHRG) Assignment

(Sorted by diagnostic group, then ICD9-CM code)

NOTE: Codes that are shown at the 3-digit level include all the underlying 4- And 5-digit codes as well

Diagnostic Group (DG)	ICD9-CM	Short Description	Primary only/ secondary only
NEURO	320.0	HEMOPHILUS MENINGITIS	Primary
NEURO	320.1	PNEUMOCOCCAL MENINGITIS	Primary
NEURO	320.2	STREPTOCOCCAL MENINGITI	Primary
NEURO	320.3	STAPHYLOCOCC MENINGITIS	Primary
NEURO	320.7	MENING IN OTH BACT DIS	Secondary
NEURO	320.81	ANAEROBIC MENINGITIS	Primary
NEURO	320.82	MNINGTS GRAM-NEG BCT NE	Primary
NEURO	320.89	MENINGITIS OTH SPCF BAC	Primary
NEURO	320.9	BACTERIAL MENINGITIS NO	Primary
NEURO	321.0	CRYPTOCOCCAL MENINGITIS	Secondary
NEURO	321.1	MENING IN OTH FUNGAL DI	Secondary
NEURO	321.2	MENING IN OTH VIRAL DIS	Secondary
NEURO	321.3	TRYPANOSOMIASIS MENINGI	Secondary
NEURO	321.4	MENINGIT D/T SARCOIDOSI	Secondary
NEURO	321.8	MENING IN OTH NONBAC DI	Secondary
NEURO	322	MENINGITIS, UNSPECIFIED	Primary
NEURO	323.0	ENCEPHALIT IN VIRAL DIS	Secondary
NEURO	323.1	RICKETTSIAL ENCEPHALITI	Secondary
NEURO	323.2	PROTOZOAL ENCEPHALITIS	Secondary
NEURO	323.4	OTH ENCEPHALIT D/T INFE	Secondary
NEURO	323.5	POSTIMMUNIZAT ENCEPHALI	Primary
NEURO	323.6	POSTINFECT ENCEPHALITIS	Secondary
NEURO	323.7	TOXIC ENCEPHALITIS	Secondary
NEURO	323.8	ENCEPHALITIS NEC	Primary
NEURO	323.9	ENCEPHALITIS NOS	Primary
NEURO	324	CNS ABSCESS	Primary
NEURO	325	PHLEBITIS INTRCRAN SINU	Primary
NEURO	326	LATE EFF CNS ABSCESS	Primary
NEURO	330.0	LEUKODYSTROPHY	Primary
NEURO	330.1	CEREBRAL LIPIDOSES	Primary
NEURO	330.2	CEREB DEGEN IN LIPIDOSI	Secondary
NEURO	330.3	CERB DEG CHLD IN OTH DI	Secondary
NEURO	330.8	CEREB DEGEN IN CHILD NE	Primary
NEURO	330.9	CEREB DEGEN IN CHILD NO	Primary
NEURO	331.0	ALZHEIMER'S DISEASE	Primary
NEURO	331.1	PICK'S DISEASE	Primary
NEURO	331.2	SENILE DEGENERAT BRAIN	Primary
NEURO	331.3	COMMUNICAT HYDROCEPHALU	Primary
NEURO	331.4	OBSTRUCTIV HYDROCEPHALU	Primary
NEURO	331.7	CEREB DEGEN IN OTH DIS	Secondary
NEURO	331.81	REYE'S SYNDROME	Primary
NEURO	331.89	CEREB DEGENERATION NEC	Primary

Appendix B
ICD9-CM Diagnosis Codes Comprising the Diagnostic Groups (DGs) for Home Health Resource Group (HHRG) Assignment

(Sorted by diagnostic group, then ICD9-CM code)

NOTE: Codes that are shown at the 3-digit level include all the underlying 4- And 5-digit codes as well

Diagnostic Group (DG)	ICD9-CM	Short Description	Primary only/ secondary only
NEURO	331.9	CEREB DEGENERATION NOS	Primary
NEURO	332	PARKINSON'S DISEASE	Primary
NEURO	333	EXTRAPYRAMIDAL DIS NEC	Primary
NEURO	334.0	FRIEDREICH'S ATAXIA	Primary
NEURO	334.1	HERED SPASTIC PARAPLEGI	Primary
NEURO	334.2	PRIMARY CEREBELLAR DEGE	Primary
NEURO	334.3	CEREBELLAR ATAXIA NEC	Primary
NEURO	334.4	CEREBEL ATAX IN OTH DIS	Secondary
NEURO	334.8	SPINOCEREBELLAR DIS NEC	Primary
NEURO	334.9	SPINOCEREBELLAR DIS NOS	Primary
NEURO	335	ANT HORN CELL DISEASE	Primary
NEURO	336.0	SYRINGOMYELIA	Primary
NEURO	336.1	VASCULAR MYELOPATHIES	Primary
NEURO	336.2	COMB DEG CORD IN OTH DI	Secondary
NEURO	336.3	MYELOPATHY IN OTH DIS	Secondary
NEURO	336.8	MYELOPATHY NEC	Primary
NEURO	336.9	SPINAL CORD DISEASE NOS	Primary
NEURO	337.0	IDIOPATH AUTO NEUROPATH	Primary
NEURO	337.1	AUT NEUROPTHY IN OTH DI	Secondary
NEURO	337.20	UNSP RFLX SYMPTH DYSTRP	Primary
NEURO	337.21	RFLX SYM DYSTRPH UP LIM	Primary
NEURO	337.22	RFLX SYM DYSTRPH LWR LM	Primary
NEURO	337.29	RFLX SYM DYSTRPH OTH ST	Primary
NEURO	337.3	AUTONOMIC DYSREFLEXIA	Primary
NEURO	337.9	AUTONOMIC NERVE DIS NEC	Primary
NEURO	340	MULTIPLE SCLEROSIS	Primary
NEURO	341	OTHER CNS DEMYELINATION	Primary
NEURO	342	HEMIPLEGIA	Primary
NEURO	343	INFANTILE CEREBRAL PALSY	Primary
NEURO	344	OTH PARALYTIC SYNDROMES	Primary
NEURO	347	CATAPLEXY AND NARCOLEPS	Primary
NEURO	348	OTHER BRAIN CONDITIONS	Primary
NEURO	349	CNS DISORDER NEC/NOS	Primary
NEURO	352	DISORDER CRAN NERVE NEC	Primary
NEURO	356	HERED PERIPH NEUROPATHY	Primary
NEURO	357.0	AC INFECT POLYNEURITIS	Primary
NEURO	357.1	NEURPTHY IN COL VASC DI	Secondary
NEURO	357.2	NEUROPATHY IN DIABETES	Secondary
NEURO	357.3	NEUROPATHY IN MALIG DIS	Secondary
NEURO	357.4	NEUROPATHY IN OTHER DIS	Secondary
NEURO	357.5	ALCOHOLIC POLYNEUROPATH	Primary
NEURO	357.6	NEUROPATHY DUE TO DRUGS	Primary

Appendix B
ICD9-CM Diagnosis Codes Comprising the Diagnostic Groups (DGs) for Home Health Resource Group (HHRG) Assignment

(Sorted by diagnostic group, then ICD9-CM code)

NOTE: Codes that are shown at the 3-digit level include all the underlying 4- And 5-digit codes as well

Diagnostic Group (DG)	ICD9-CM	Short Description	Primary only/ secondary only
NEURO	357.7	NEURPTHY TOXIC AGENT NE	Primary
NEURO	357.8	INFLAM/TOX NEUROPTHY NE	Primary
NEURO	357.9	INFLAM/TOX NEUROPTHY NO	Primary
NEURO	358.0	MYASTHENIA GRAVIS	Primary
NEURO	358.1	MYASTHENIA IN OTH DIS	Secondary
NEURO	358.2	TOXIC MYONEURAL DISORDE	Primary
NEURO	358.8	MYONEURAL DISORDERS NEC	Primary
NEURO	358.9	MYONEURAL DISORDERS NOS	Primary
NEURO	392	RHEUMATIC CHOREA	Primary
NEURO	430	SUBARACHNOID HEMORRHAGE	Primary
NEURO	431	INTRACEREBRAL HEMORRHAG	Primary
NEURO	432	INTRACRANIAL HEM NEC/NOS	Primary
NEURO	433	PRECEREBRAL OCCLUSION	Primary
NEURO	434	CEREBRAL ARTERY OCCLUS	Primary
NEURO	435	TRANSIENT CEREB ISCHEMIA	Primary
NEURO	436	CVA	Primary
NEURO	437	OTH CEREBROVASC DISEASE	Primary
NEURO	741	SPINA BIFIDA	Primary
NEURO	742	OTH NERVOUS SYSTEM ANOM	Primary
NEURO	851	CEREBRAL LACER/CONTUSION	Primary
NEURO	852	MENINGEAL HEM FOLLOW INJ	Primary
NEURO	853	OTH TRAUMATIC BRAIN HEM	Primary
NEURO	854	OTHER BRAIN INJURY	Primary
NEURO	907	LATE EFF NERV SYSTEM INJ	Primary
NEURO	950	INJ OPTIC NERV/PATHWAYS	Primary
NEURO	951	CRANIAL NERVE INJURY NEC	Primary
NEURO	952	SPINAL CORD INJ W/O FX	Primary
NEURO	953	INJ NERVE ROOT/SPIN PLEX	Primary
NEURO	954	INJURY OTH TRUNK NERVE	Primary
NEURO	955	INJ PERIPH NERV SHLD/ARM	Primary
NEURO	956	INJ PERIPH NERV PELV/LEG	Primary
ORTHO	170	MAL NEO BONE/ARTIC CART	Primary
ORTHO	171	MAL NEO SOFT TISSUE	Primary
ORTHO	213	BEN NEO BONE/ARTIC CART	Primary
ORTHO	274	GOUT	Primary
ORTHO	710	DIFF CONNECTIVE TISS DIS	Primary
ORTHO	711.00	PYOGEN ARTHRITIS-UNSPEC	Primary
ORTHO	711.01	PYOGEN ARTHRITIS-SHLDER	Primary
ORTHO	711.02	PYOGEN ARTHRITIS-UP/ARM	Primary
ORTHO	711.03	PYOGEN ARTHRITIS-FOREAR	Primary
ORTHO	711.04	PYOGEN ARTHRITIS-HAND	Primary
ORTHO	711.05	PYOGEN ARTHRITIS-PELVIS	Primary

Appendix B
ICD9-CM Diagnosis Codes Comprising the Diagnostic Groups (DGs) for Home Health Resource Group (HHRG) Assignment

(Sorted by diagnostic group, then ICD9-CM code)

NOTE: Codes that are shown at the 3-digit level include all the underlying 4- And 5-digit codes as well

Diagnostic Group (DG)	ICD9-CM	Short Description	Primary only/ secondary only
ORTHO	711.06	PYOGEN ARTHRITIS-L/LEG	Primary
ORTHO	711.07	PYOGEN ARTHRITIS-ANKLE	Primary
ORTHO	711.08	PYOGEN ARTHRITIS NEC	Primary
ORTHO	711.09	PYOGEN ARTHRITIS-MULT	Primary
ORTHO	711.10	REITER ARTHRITIS-UNSPEC	Secondary
ORTHO	711.11	REITER ARTHRITIS-SHLDER	Secondary
ORTHO	711.12	REITER ARTHRITIS-UP/ARM	Secondary
ORTHO	711.13	REITER ARTHRITIS-FOREAR	Secondary
ORTHO	711.14	REITER ARTHRITIS-HAND	Secondary
ORTHO	711.15	REITER ARTHRITIS-PELVIS	Secondary
ORTHO	711.16	REITER ARTHRITIS-L/LEG	Secondary
ORTHO	711.17	REITER ARTHRITIS-ANKLE	Secondary
ORTHO	711.18	REITER ARTHRITIS NEC	Secondary
ORTHO	711.19	REITER ARTHRITIS-MULT	Secondary
ORTHO	711.20	BEHCET ARTHRITIS-UNSPEC	Secondary
ORTHO	711.21	BEHCET ARTHRITIS-SHLDER	Secondary
ORTHO	711.22	BEHCET ARTHRITIS-UP/ARM	Secondary
ORTHO	711.23	BEHCET ARTHRITIS-FOREAR	Secondary
ORTHO	711.24	BEHCET ARTHRITIS-HAND	Secondary
ORTHO	711.25	BEHCET ARTHRITIS-PELVIS	Secondary
ORTHO	711.26	BEHCET ARTHRITIS-L/LEG	Secondary
ORTHO	711.27	BEHCET ARTHRITIS-ANKLE	Secondary
ORTHO	711.28	BEHCET ARTHRITIS NEC	Secondary
ORTHO	711.29	BEHCET ARTHRITIS-MULT	Secondary
ORTHO	711.30	DYSENTER ARTHRIT-UNSPEC	Secondary
ORTHO	711.31	DYSENTER ARTHRIT-SHLDER	Secondary
ORTHO	711.32	DYSENTER ARTHRIT-UP/ARM	Secondary
ORTHO	711.33	DYSENTER ARTHRIT-FOREAR	Secondary
ORTHO	711.34	DYSENTER ARTHRIT-HAND	Secondary
ORTHO	711.35	DYSENTER ARTHRIT-PELVIS	Secondary
ORTHO	711.36	DYSENTER ARTHRIT-L/LEG	Secondary
ORTHO	711.37	DYSENTER ARTHRIT-ANKLE	Secondary
ORTHO	711.38	DYSENTER ARTHRIT NEC	Secondary
ORTHO	711.39	DYSENTER ARTHRIT-MULT	Secondary
ORTHO	711.40	BACT ARTHRITIS-UNSPEC	Secondary
ORTHO	711.41	BACT ARTHRITIS-SHLDER	Secondary
ORTHO	711.42	BACT ARTHRITIS-UP/ARM	Secondary
ORTHO	711.43	BACT ARTHRITIS-FOREARM	Secondary
ORTHO	711.44	BACT ARTHRITIS-HAND	Secondary
ORTHO	711.45	BACT ARTHRITIS-PELVIS	Secondary
ORTHO	711.46	BACT ARTHRITIS-L/LEG	Secondary
ORTHO	711.47	BACT ARTHRITIS-ANKLE	Secondary

Appendix B
ICD9-CM Diagnosis Codes Comprising the Diagnostic Groups (DGs) for Home Health Resource Group (HHRG) Assignment

(Sorted by diagnostic group, then ICD9-CM code)

NOTE: Codes that are shown at the 3-digit level include all the underlying 4- And 5-digit codes as well

Diagnostic Group (DG)	ICD9-CM	Short Description	Primary only/ secondary only
ORTHO	711.48	BACT ARTHRITIS NEC	Secondary
ORTHO	711.49	BACT ARTHRITIS-MULT	Secondary
ORTHO	711.50	VIRAL ARTHRITIS-UNSPEC	Secondary
ORTHO	711.51	VIRAL ARTHRITIS-SHLDER	Secondary
ORTHO	711.52	VIRAL ARTHRITIS-UP/ARM	Secondary
ORTHO	711.53	VIRAL ARTHRITIS-FOREARM	Secondary
ORTHO	711.54	VIRAL ARTHRITIS-HAND	Secondary
ORTHO	711.55	VIRAL ARTHRITIS-PELVIS	Secondary
ORTHO	711.56	VIRAL ARTHRITIS-L/LEG	Secondary
ORTHO	711.57	VIRAL ARTHRITIS-ANKLE	Secondary
ORTHO	711.58	VIRAL ARTHRITIS NEC	Secondary
ORTHO	711.59	VIRAL ARTHRITIS-MULT	Secondary
ORTHO	711.60	MYCOTIC ARTHRITIS-UNSPE	Secondary
ORTHO	711.61	MYCOTIC ARTHRITIS-SHLDE	Secondary
ORTHO	711.62	MYCOTIC ARTHRITIS-UP/AR	Secondary
ORTHO	711.63	MYCOTIC ARTHRIT-FOREARM	Secondary
ORTHO	711.64	MYCOTIC ARTHRITIS-HAND	Secondary
ORTHO	711.65	MYCOTIC ARTHRITIS-PELVI	Secondary
ORTHO	711.66	MYCOTIC ARTHRITIS-L/LEG	Secondary
ORTHO	711.67	MYCOTIC ARTHRITIS-ANKLE	Secondary
ORTHO	711.68	MYCOTIC ARTHRITIS NEC	Secondary
ORTHO	711.69	MYCOTIC ARTHRITIS-MULT	Secondary
ORTHO	711.70	HELMINTH ARTHRIT-UNSPEC	Secondary
ORTHO	711.71	HELMINTH ARTHRIT-SHLDER	Secondary
ORTHO	711.72	HELMINTH ARTHRIT-UP/ARM	Secondary
ORTHO	711.73	HELMINTH ARTHRIT-FOREAR	Secondary
ORTHO	711.74	HELMINTH ARTHRIT-HAND	Secondary
ORTHO	711.75	HELMINTH ARTHRIT-PELVIS	Secondary
ORTHO	711.76	HELMINTH ARTHRIT-L/LEG	Secondary
ORTHO	711.77	HELMINTH ARTHRIT-ANKLE	Secondary
ORTHO	711.78	HELMINTH ARTHRIT NEC	Secondary
ORTHO	711.79	HELMINTH ARTHRIT-MULT	Secondary
ORTHO	711.80	INF ARTHRITIS NEC-UNSPE	Secondary
ORTHO	711.81	INF ARTHRITIS NEC-SHLDE	Secondary
ORTHO	711.82	INF ARTHRITIS NEC-UP/AR	Secondary
ORTHO	711.83	INF ARTHRIT NEC-FOREARM	Secondary
ORTHO	711.84	INF ARTHRITIS NEC-HAND	Secondary
ORTHO	711.85	INF ARTHRITIS NEC-PELVI	Secondary
ORTHO	711.86	INF ARTHRITIS NEC-L/LEG	Secondary
ORTHO	711.87	INF ARTHRITIS NEC-ANKLE	Secondary
ORTHO	711.88	INF ARTHRIT NEC-OTH SIT	Secondary
ORTHO	711.89	INF ARTHRITIS NEC-MULT	Secondary

Appendix B
ICD9-CM Diagnosis Codes Comprising the Diagnostic Groups (DGs) for Home Health Resource Group (HHRG) Assignment

(Sorted by diagnostic group, then ICD9-CM code)

NOTE: Codes that are shown at the 3-digit level include all the underlying 4- And 5-digit codes as well

Diagnostic Group (DG)	ICD9-CM	Short Description	Primary only/ secondary only
ORTHO	711.90	INF ARTHRITIS NOS-UNSPE	Primary
ORTHO	711.91	INF ARTHRITIS NOS-SHLDE	Primary
ORTHO	711.92	INF ARTHRITIS NOS-UP/AR	Primary
ORTHO	711.93	INF ARTHRIT NOS-FOREARM	Primary
ORTHO	711.94	INF ARTHRIT NOS-HAND	Primary
ORTHO	711.95	INF ARTHRIT NOS-PELVIS	Primary
ORTHO	711.96	INF ARTHRIT NOS-L/LEG	Primary
ORTHO	711.97	INF ARTHRIT NOS-ANKLE	Primary
ORTHO	711.98	INF ARTHRIT NOS-OTH SIT	Primary
ORTHO	711.99	INF ARTHRITIS NOS-MULT	Primary
ORTHO	712.10	DICALC PHOS CRYST-UNSPE	Secondary
ORTHO	712.11	DICALC PHOS CRYST-SHLDE	Secondary
ORTHO	712.12	DICALC PHOS CRYST-UP/AR	Secondary
ORTHO	712.13	DICALC PHOS CRYS-FOREAR	Secondary
ORTHO	712.14	DICALC PHOS CRYST-HAND	Secondary
ORTHO	712.15	DICALC PHOS CRYST-PELVI	Secondary
ORTHO	712.16	DICALC PHOS CRYST-L/LEG	Secondary
ORTHO	712.17	DICALC PHOS CRYST-ANKLE	Secondary
ORTHO	712.18	DICALC PHOS CRY-SITE NE	Secondary
ORTHO	712.19	DICALC PHOS CRYST-MULT	Secondary
ORTHO	712.20	PYROPHOSPH CRYST-UNSPEC	Secondary
ORTHO	712.21	PYROPHOSPH CRYST-SHLDER	Secondary
ORTHO	712.22	PYROPHOSPH CRYST-UP/ARM	Secondary
ORTHO	712.23	PYROPHOSPH CRYST-FOREAR	Secondary
ORTHO	712.24	PYROPHOSPH CRYST-HAND	Secondary
ORTHO	712.25	PYROPHOSPH CRYST-PELVIS	Secondary
ORTHO	712.26	PYROPHOSPH CRYST-L/LEG	Secondary
ORTHO	712.27	PYROPHOSPH CRYST-ANKLE	Secondary
ORTHO	712.28	PYROPHOS CRYST-SITE NEC	Secondary
ORTHO	712.29	PYROPHOS CRYST-MULT	Secondary
ORTHO	712.30	CHONDROCALCIN NOS-UNSPE	Secondary
ORTHO	712.31	CHONDROCALCIN NOS-SHLDE	Secondary
ORTHO	712.32	CHONDROCALCIN NOS-UP/AR	Secondary
ORTHO	712.33	CHONDROCALC NOS-FOREARM	Secondary
ORTHO	712.34	CHONDROCALCIN NOS-HAND	Secondary
ORTHO	712.35	CHONDROCALCIN NOS-PELVI	Secondary
ORTHO	712.36	CHONDROCALCIN NOS-L/LEG	Secondary
ORTHO	712.37	CHONDROCALCIN NOS-ANKLE	Secondary
ORTHO	712.38	CHONDROCALC NOS-OTH SIT	Secondary
ORTHO	712.39	CHONDROCALCIN NOS-MULT	Secondary
ORTHO	712.80	CRYST ARTHROP NEC-UNSPE	Primary
ORTHO	712.81	CRYST ARTHROP NEC-SHLDE	Primary

Appendix B
ICD9-CM Diagnosis Codes Comprising the Diagnostic Groups (DGs) for Home Health Resource Group (HHRG) Assignment

(Sorted by diagnostic group, then ICD9-CM code)

NOTE: Codes that are shown at the 3-digit level include all the underlying 4- And 5-digit codes as well

Diagnostic Group (DG)	ICD9-CM	Short Description	Primary only/ secondary only
ORTHO	712.82	CRYST ARTHROP NEC-UP/AR	Primary
ORTHO	712.83	CRYS ARTHROP NEC-FOREAR	Primary
ORTHO	712.84	CRYST ARTHROP NEC-HAND	Primary
ORTHO	712.85	CRYST ARTHROP NEC-PELVI	Primary
ORTHO	712.86	CRYST ARTHROP NEC-L/LEG	Primary
ORTHO	712.87	CRYST ARTHROP NEC-ANKLE	Primary
ORTHO	712.88	CRY ARTHROP NEC-OTH SIT	Primary
ORTHO	712.89	CRYST ARTHROP NEC-MULT	Primary
ORTHO	712.90	CRYST ARTHROP NOS-UNSPE	Primary
ORTHO	712.91	CRYST ARTHROP NOS-SHLDR	Primary
ORTHO	712.92	CRYST ARTHROP NOS-UP/AR	Primary
ORTHO	712.93	CRYS ARTHROP NOS-FOREAR	Primary
ORTHO	712.94	CRYST ARTHROP NOS-HAND	Primary
ORTHO	712.95	CRYST ARTHROP NOS-PELVI	Primary
ORTHO	712.96	CRYST ARTHROP NOS-L/LEG	Primary
ORTHO	712.97	CRYST ARTHROP NOS-ANKLE	Primary
ORTHO	712.98	CRY ARTHROP NOS-OTH SIT	Primary
ORTHO	712.99	CRYST ARTHROP NOS-MULT	Primary
ORTHO	713.0	ARTHROP W ENDOCR/MET DI	Secondary
ORTHO	713.1	ARTHROP W NONINF GI DIS	Secondary
ORTHO	713.2	ARTHROPATH W HEMATOL DI	Secondary
ORTHO	713.3	ARTHROPATHY W SKIN DIS	Secondary
ORTHO	713.4	ARTHROPATHY W RESP DIS	Secondary
ORTHO	713.5	ARTHROPATHY W NERVE DIS	Secondary
ORTHO	713.6	ARTHROP W HYPERSEN REAC	Secondary
ORTHO	713.7	ARTHROP W SYSTEM DIS NE	Secondary
ORTHO	713.8	ARTHROP W OTH DIS NEC	Secondary
ORTHO	714	OTH INFLAMM POLYARTHROP	Primary
ORTHO	716	ARTHROPATHIES NEC/NOS	Primary
ORTHO	717	INTERNAL DERANGEMNT KNEE	Primary
ORTHO	718	OTHER JOINT DERANGEMENT	Primary
ORTHO	720.0	ANKYLOSING SPONDYLITIS	Primary
ORTHO	720.1	SPINAL ENTHESOPATHY	Primary
ORTHO	720.2	SACROILIITIS NEC	Primary
ORTHO	720.81	SPONDYLOPATHY IN OTH DI	Secondary
ORTHO	720.89	INFLAM SPONDYLOPATHY NE	Primary
ORTHO	720.9	INFLAM SPONDYLOPATHY NO	Primary
ORTHO	721	SPONDYLOSIS ET AL	Primary
ORTHO	722	INTERVERTEBRAL DISC DIS	Primary
ORTHO	723	OTHER CERVICAL SPINE DIS	Primary
ORTHO	724	BACK DISORDER NEC & NOS	Primary
ORTHO	725	POLYMYALGIA RHEUMATICA	Primary

Appendix B
ICD9-CM Diagnosis Codes Comprising the Diagnostic Groups (DGs) for Home Health Resource Group (HHRG) Assignment

(Sorted by diagnostic group, then ICD9-CM code)

NOTE: Codes that are shown at the 3-digit level include all the underlying 4- And 5-digit codes as well

Diagnostic Group (DG)	ICD9-CM	Short Description	Primary only/ secondary only
ORTHO	728	DIS OF MUSCLE/LIG/FASCIA	Primary
ORTHO	730.00	AC OSTEOMYELITIS-UNSPEC	Primary
ORTHO	730.01	AC OSTEOMYELITIS-SHLDER	Primary
ORTHO	730.02	AC OSTEOMYELITIS-UP/ARM	Primary
ORTHO	730.03	AC OSTEOMYELITIS-FOREAR	Primary
ORTHO	730.04	AC OSTEOMYELITIS-HAND	Primary
ORTHO	730.05	AC OSTEOMYELITIS-PELVIS	Primary
ORTHO	730.06	AC OSTEOMYELITIS-L/LEG	Primary
ORTHO	730.07	AC OSTEOMYELITIS-ANKLE	Primary
ORTHO	730.08	AC OSTEOMYELITIS NEC	Primary
ORTHO	730.09	AC OSTEOMYELITIS-MULT	Primary
ORTHO	730.10	CHR OSTEOMYELITIS-UNSP	Primary
ORTHO	730.11	CHR OSTEOMYELIT-SHLDER	Primary
ORTHO	730.12	CHR OSTEOMYELIT-UP/ARM	Primary
ORTHO	730.13	CHR OSTEOMYELIT-FOREARM	Primary
ORTHO	730.14	CHR OSTEOMYELIT-HAND	Primary
ORTHO	730.15	CHR OSTEOMYELIT-PELVIS	Primary
ORTHO	730.16	CHR OSTEOMYELIT-L/LEG	Primary
ORTHO	730.17	CHR OSTEOMYELIT-ANKLE	Primary
ORTHO	730.18	CHR OSTEOMYELIT NEC	Primary
ORTHO	730.19	CHR OSTEOMYELIT-MULT	Primary
ORTHO	730.20	OSTEOMYELITIS NOS-UNSPE	Primary
ORTHO	730.21	OSTEOMYELITIS NOS-SHLDE	Primary
ORTHO	730.22	OSTEOMYELITIS NOS-UP/AR	Primary
ORTHO	730.23	OSTEOMYELIT NOS-FOREARM	Primary
ORTHO	730.24	OSTEOMYELITIS NOS-HAND	Primary
ORTHO	730.25	OSTEOMYELITIS NOS-PELVI	Primary
ORTHO	730.26	OSTEOMYELITIS NOS-L/LEG	Primary
ORTHO	730.27	OSTEOMYELITIS NOS-ANKLE	Primary
ORTHO	730.28	OSTEOMYELIT NOS-OTH SIT	Primary
ORTHO	730.29	OSTEOMYELITIS NOS-MULT	Primary
ORTHO	730.30	PERIOSTITIS-UNSPEC	Primary
ORTHO	730.31	PERIOSTITIS-SHLDER	Primary
ORTHO	730.32	PERIOSTITIS-UP/ARM	Primary
ORTHO	730.33	PERIOSTITIS-FOREARM	Primary
ORTHO	730.34	PERIOSTITIS-HAND	Primary
ORTHO	730.35	PERIOSTITIS-PELVIS	Primary
ORTHO	730.36	PERIOSTITIS-L/LEG	Primary
ORTHO	730.37	PERIOSTITIS-ANKLE	Primary
ORTHO	730.38	PERIOSTITIS NEC	Primary
ORTHO	730.39	PERIOSTITIS-MULT	Primary
ORTHO	730.70	POLIO OSTEOPATHY-UNSPEC	Secondary

Appendix B
ICD9-CM Diagnosis Codes Comprising the Diagnostic Groups (DGs) for Home Health Resource Group (HHRG) Assignment

(Sorted by diagnostic group, then ICD9-CM code)

NOTE: Codes that are shown at the 3-digit level include all the underlying 4- And 5-digit codes as well

Diagnostic Group (DG)	ICD9-CM	Short Description	Primary only/ secondary only
ORTHO	730.71	POLIO OSTEOPATHY-SHLDER	Secondary
ORTHO	730.72	POLIO OSTEOPATHY-UP/ARM	Secondary
ORTHO	730.73	POLIO OSTEOPATHY-FOREAR	Secondary
ORTHO	730.74	POLIO OSTEOPATHY-HAND	Secondary
ORTHO	730.75	POLIO OSTEOPATHY-PELVIS	Secondary
ORTHO	730.76	POLIO OSTEOPATHY-L/LEG	Secondary
ORTHO	730.77	POLIO OSTEOPATHY-ANKLE	Secondary
ORTHO	730.78	POLIO OSTEOPATHY NEC	Secondary
ORTHO	730.79	POLIO OSTEOPATHY-MULT	Secondary
ORTHO	730.80	BONE INFECT NEC-UNSPEC	Secondary
ORTHO	730.81	BONE INFECT NEC-SHLDER	Secondary
ORTHO	730.82	BONE INFECT NEC-UP/ARM	Secondary
ORTHO	730.83	BONE INFECT NEC-FOREARM	Secondary
ORTHO	730.84	BONE INFECT NEC-HAND	Secondary
ORTHO	730.85	BONE INFECT NEC-PELVIS	Secondary
ORTHO	730.86	BONE INFECT NEC-L/LEG	Secondary
ORTHO	730.87	BONE INFECT NEC-ANKLE	Secondary
ORTHO	730.88	BONE INFECT NEC-OTH SIT	Secondary
ORTHO	730.89	BONE INFECT NEC-MULT	Secondary
ORTHO	730.90	BONE INFEC NOS-UNSP SIT	Primary
ORTHO	730.91	BONE INFECT NOS-SHLDER	Primary
ORTHO	730.92	BONE INFECT NOS-UP/ARM	Primary
ORTHO	730.93	BONE INFECT NOS-FOREARM	Primary
ORTHO	730.94	BONE INFECT NOS-HAND	Primary
ORTHO	730.95	BONE INFECT NOS-PELVIS	Primary
ORTHO	730.96	BONE INFECT NOS-L/LEG	Primary
ORTHO	730.97	BONE INFECT NOS-ANKLE	Primary
ORTHO	730.98	BONE INFECT NOS-OTH SIT	Primary
ORTHO	730.99	BONE INFECT NOS-MULT	Primary
ORTHO	731.0	OSTEITIS DEFORMANS NOS	Primary
ORTHO	731.1	OSTEITIS DEF IN OTH DIS	Secondary
ORTHO	731.2	HYPERTROPH OSTEOARTHROP	Primary
ORTHO	731.8	BONE INVOLV IN OTH DIS	Secondary
ORTHO	732	OSTEOCHONDROPATHIES	Primary
ORTHO	781	NERV/MUSCULSKEL SYS SYMP	Primary
ORTHO	800	SKULL VAULT FRACTURE	Primary
ORTHO	801	SKULL BASE FRACTURE	Primary
ORTHO	802	FRACTURE OF FACE BONES	Primary
ORTHO	803	OTHER SKULL FRACTURE	Primary
ORTHO	804	MULT FX SKULL W OTH BONE	Primary
ORTHO	805	VERTEBRL FX W/O CORD INJ	Primary
ORTHO	806	VERTEBRAL FX W CORD INJ	Primary

Appendix B
ICD9-CM Diagnosis Codes Comprising the Diagnostic Groups (DGs) for Home Health Resource Group (HHRG) Assignment

(Sorted by diagnostic group, then ICD9-CM code)

NOTE: Codes that are shown at the 3-digit level include all the underlying 4- And 5-digit codes as well

Diagnostic Group (DG)	ICD9-CM	Short Description	Primary only/ secondary only
ORTHO	807	FX RIB/STERN/LARYN/TRACH	Primary
ORTHO	808	PELVIC FRACTURE	Primary
ORTHO	809	FRACTURE OF TRUNK BONES	Primary
ORTHO	810	CLAVICLE FRACTURE	Primary
ORTHO	811	SCAPULA FRACTURE	Primary
ORTHO	812	HUMERUS FRACTURE	Primary
ORTHO	813	RADIUS & ULNA FRACTURE	Primary
ORTHO	814	CARPAL FRACTURE	Primary
ORTHO	815	METACARPAL FRACTURE	Primary
ORTHO	816	FRACTURE PHALANGES, HAND	Primary
ORTHO	817	MULTIPLE HAND FRACTURES	Primary
ORTHO	818	FRACTURE ARM MULT/NOS	Primary
ORTHO	819	FX ARMS W RIB/STERNUM	Primary
ORTHO	820	FRACTURE NECK OF FEMUR	Primary
ORTHO	821	OTHER FEMORAL FRACTURE	Primary
ORTHO	822	PATELLA FRACTURE	Primary
ORTHO	823	TIBIA & FIBULA FRACTURE	Primary
ORTHO	824	ANKLE FRACTURE	Primary
ORTHO	825	FX OF TARSAL/METATARSAL	Primary
ORTHO	827	LOWER LIMB FRACTURE NEC	Primary
ORTHO	828	FX LEGS W ARM/RIB	Primary
ORTHO	831	SHOULDER DISLOCATION	Primary
ORTHO	832	ELBOW DISLOCATION	Primary
ORTHO	833	WRIST DISLOCATION	Primary
ORTHO	835	DISLOCATION OF HIP	Primary
ORTHO	836	DISLOCATION OF KNEE	Primary
ORTHO	837	DISLOCATION OF ANKLE	Primary
ORTHO	838	DISLOCATION OF FOOT	Primary
ORTHO	846	SPRAIN SACROILIAC REGION	Primary
ORTHO	847	SPRAIN OF BACK NEC/NOS	Primary
ORTHO	887	TRAUMATIC AMPUT ARM/HAND	Primary
ORTHO	896	TRAUMATIC AMPUTAT FOOT	Primary
ORTHO	897	TRAUMATIC AMPUTATION LEG	Primary
ORTHO	927	CRUSHING INJ UPPER LIMB	Primary
ORTHO	928	CRUSHING INJURY OF LEG	Primary

Appendix C

Home Health Resource Groups (HHRGs) and Health Insurance PPS (HIPPS) Codes

Appendix C

Home Health Resource Groups (HHRGs) and Health Insurance PPS (HIPPS) Codes

	HHRG	HIPPS code		HHRG	HIPPS code
1	C0F0S0	HAEJ(1-8)	41	C2F0S0	HCEJ(1-8)
2	C0F0S1	HAEK(1-8)	42	C2F0S1	HCEK(1-8)
3	C0F0S2	HAEL(1-8)	43	C2F0S2	HCEL(1-8)
4	C0F0S3	HAEM(1-8)	44	C2F0S3	HCEM(1-8)
5	C0F1S0	HAFJ(1-8)	45	C2F1S0	HCFJ(1-8)
6	C0F1S1	HAFK(1-8)	46	C2F1S1	HCFK(1-8)
7	C0F1S2	HAFL(1-8)	47	C2F1S2	HCFL(1-8)
8	C0F1S3	HAFM(1-8)	48	C2F1S3	HCFM(1-8)
9	C0F2S0	HAGJ(1-8)	49	C2F2S0	HCGJ(1-8)
10	C0F2S1	HAGK(1-8)	50	C2F2S1	HCGK(1-8)
11	C0F2S2	HAGL(1-8)	51	C2F2S2	HCGL(1-8)
12	C0F2S3	HAGM(1-8)	52	C2F2S3	HCGM(1-8)
13	C0F3S0	HAHJ(1-8)	53	C2F3S0	HCHJ(1-8)
14	C0F3S1	HAHK(1-8)	54	C2F3S1	HCHK(1-8)
15	C0F3S2	HAHL(1-8)	55	C2F3S2	HCHL(1-8)
16	C0F3S3	HAHM(1-8)	56	C2F3S3	HCHM(1-8)
17	C0F4S0	HAIJ(1-8)	57	C2F4S0	HCIJ(1-8)
18	C0F4S1	HAIK(1-8)	58	C2F4S1	HCIK(1-8)
19	C0F4S2	HAIL(1-8)	59	C2F4S2	HCIL(1-8)
20	C0F4S3	HAIM(1-8)	60	C2F4S3	HCIM(1-8)
21	C1F0S0	HBEJ(1-8)	61	C3F0S0	HDEJ(1-8)
22	C1F0S1	HBEK(1-8)	62	C3F0S1	HDEK(1-8)
23	C1F0S2	HBEL(1-8)	63	C3F0S2	HDEL(1-8)
24	C1F0S3	HBEM(1-8)	64	C3F0S3	HDEM(1-8)
25	C1F1S0	HBFJ(1-8)	65	C3F1S0	HDFJ(1-8)
26	C1F1S1	HBFK(1-8)	66	C3F1S1	HDFK(1-8)
27	C1F1S2	HBFL(1-8)	67	C3F1S2	HDFL(1-8)
28	C1F1S3	HBFM(1-8)	68	C3F1S3	HDFM(1-8)
29	C1F2S0	HBGJ(1-8)	69	C3F2S0	HDGJ(1-8)
30	C1F2S1	HBGK(1-8)	70	C3F2S1	HDGK(1-8)
31	C1F2S2	HBGL(1-8)	71	C3F2S2	HDGL(1-8)
32	C1F2S3	HBGM(1-8)	72	C3F2S3	HDGM(1-8)
33	C1F3S0	HBHJ(1-8)	73	C3F3S0	HDHJ(1-8)
34	C1F3S1	HBHK(1-8)	74	C3F3S1	HDHK(1-8)
35	C1F3S2	HBHL(1-8)	75	C3F3S2	HDHL(1-8)
36	C1F3S3	HBHM(1-8)	76	C3F3S3	HDHM(1-8)
37	C1F4S0	HBIJ(1-8)	77	C3F4S0	HDIJ(1-8)
38	C1F4S1	HBIK(1-8)	78	C3F4S1	HDIK(1-8)
39	C1F4S2	HBIL(1-8)	79	C3F4S2	HDIL(1-8)
40	C1F4S3	HBIM(1-8)	80	C3F4S3	HDIM(1-8)

+